

APTAMER-MEDIATED REGULATION OF GENE EXPRESSION

ABSTRACT OF THE DISCLOSURE

This invention provides methods of regulating gene expression. An aptamer is positioned in a nucleic acid molecule along with a sequence encoding a transcriptional regulatory polypeptide. The aptamer disrupts translation of the transcriptional regulatory polypeptide when contacted with an aptamer-binding ligand. Gene expression levels can be
5 either increased or decreased by the disclosed methods, depending on whether the transcriptional regulatory polypeptide is a repressor or activator, and the degree of the effect is dependent upon the dose of the ligand. Nucleic acid molecules, expression cassettes, expression vectors and cells useful in the gene regulation methods are also provided.

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